

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
20 October 2005 (20.10.2005)

PCT

(10) International Publication Number
WO 2005/098855 A1

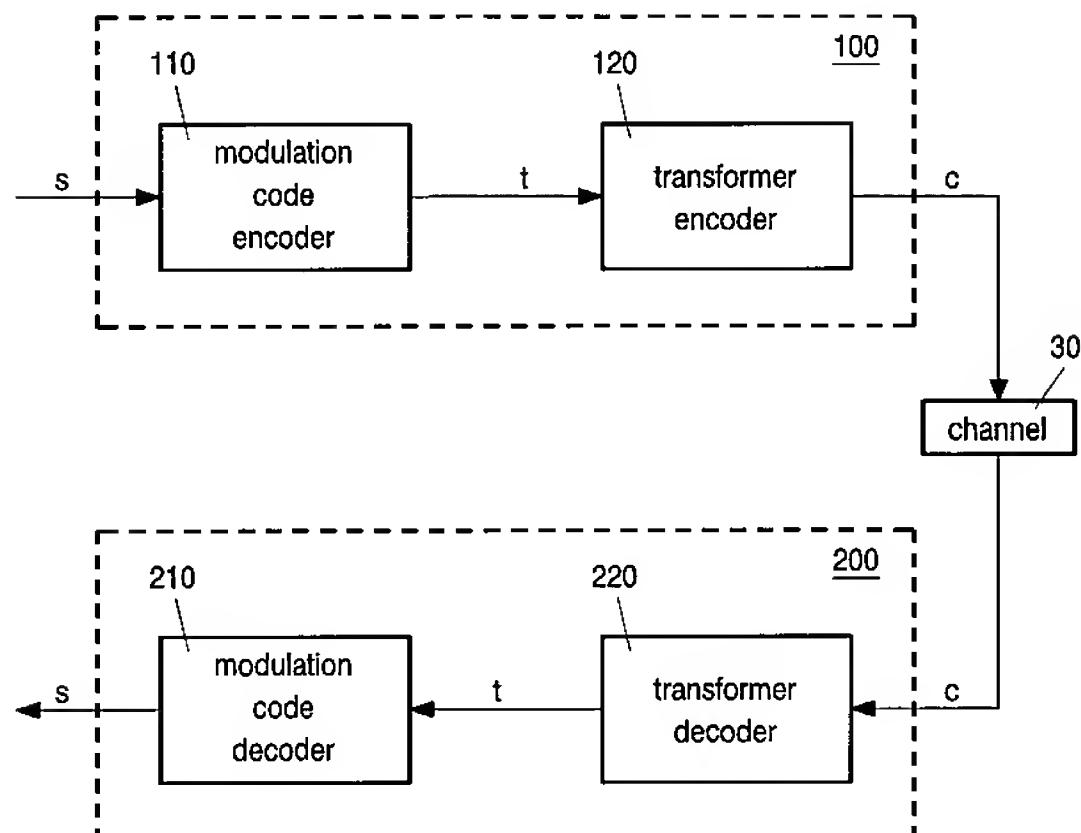
- (51) International Patent Classification⁷: **G11B 20/14, H03M 5/14**
- (21) International Application Number:
PCT/IB2005/051097
- (22) International Filing Date: **1 April 2005 (01.04.2005)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
04101473.9 9 April 2004 (09.04.2004) EP
- (71) Applicant (*for all designated States except US*): **KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).**
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **HOLLMANN, Hendrik, D., L. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). BERGMANS, Johannes, W., M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).**
- (74) Agents: **DE HOOG, Johannes, H. et al.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).**
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MODULATION CODE SYSTEM AND METHODS OF ENCODING AND DECODING A SIGNAL



(57) **Abstract:** The invention relates to a modulation code system and a corresponding modulation method. Said modulation system comprises an encoder (100) for transforming an original signal (s) into an encoded signal (c) satisfying predefined second constraints. Said modulation code system further comprises a decoder (200) for decoding the encoded signal (c), after restoration, back into the original signal (s). It is the object of the invention to improve such a known modulation code system and method the amount of required by reducing hardware. This object is achieved by designing the encoder (100) such that it comprises a series connection of a modulation code encoder (110) and a transformer encoder (120) used for filtering an intermediate signal (t), output by said modulation code encoder (110) and satisfying predefined first constraints, in order to generate said encoder output signal (c). The decoder (200) comprises a series connection of a transformer decoder (220) and a modulation code decoder (210).

WO 2005/098855 A1